

CS 6510  
Programming Languages

Spring 2017

Instructor: **Matthew Flatt**

# Course Details

<http://www.eng.utah.edu/~cs6510/>

# Lectures are Online

After today, all slide presentations are online

- Watch the videos before class
- Class is for more examples and homework solutions
  - a.k.a. “recitation”
  - guideline: no new material introduced in class

# Programming Language Concepts

This course teaches concepts in two ways:

By implementing **interpreters**

- new concept  $\Rightarrow$  new interpreter

By using **Racket** and variants

- we don't assume that you already know Racket

# Interpreters

An ***interpreter*** takes a program and produces a result

- DrRacket
- x86 processor
- desktop calculator
- **bash**
- Algebra student

A ***compiler*** takes a program and produces another program

In the terminology of programming languages, someone who translates Chinese to English is a *compiler*, not an *interpreter*.

# Racket and `plai`-typed

**Lisp** ➔ **Scheme** ➔ **Racket**

**Racket** is

- a programming language
- a family of programming languages
- a language for creating programming languages

... including `plai`-typed

**Racket** ➔ `plai`-typed ← **ML**

PLAI = *Programming Languages: Application and Interpretation*, the textbook

`plai-typed`

See `quick-ref.rkt`

# Homework 0

- Create handin account
- Racket/**plai**-typed warm-up exercises

Due Friday, January 13